PATENT

AMENDMENT(S) TO THE CLAIMS

1. (canceled)

2. (previously presented) A rotary atomizer for a coating material applicator, said atomizer comprising:

a rotating element having a longitudinal opening therethrough;

a bell cup connected to said rotating element for rotation therewith, said bell cup having inner and outer edges, an outer surface and an inner surface receiving coating material to be atomized, said inner surface being open to said longitudinal opening in said rotating element;

a cleaning fluid conduit in flow communication with said longitudinal opening in said rotating element; and

a flow enhancing formation defined in said longitudinal opening to improve transport of cleaning fluid along said longitudinal opening, said flow enhancing formation being a groove in a surface defining said longitudinal opening.

3. (original) The rotary atomizer of claim 2, said groove being helical.

4. (previously presented) The rotary atomizer of claim 2, including an orifice behind said bell cup directed at said outer surface, and a cleaning fluid conduit in flow communication with said orifice.

5. (original) The rotary atomizer of claim 4, said flow enhancing formation being a groove in a surface defining said longitudinal opening.

6. (original) The rotary atomizer of claim 4, said flow enhancing formation being a helical groove in a surface defining said longitudinal opening.

7. (original) The rotary atomizer of claim 4, said orifice directed at an area nearer to said inner edge than to said outer edge of said bell cup.

8. (original) The rotary atomizer of claim 4, said orifice configured to direct a fan-shaped spray at said outer surface.

9. (original) The rotary atomizer of claim 8, said orifice directed at an area nearer to said inner edge than to said outer edge of said bell cup.

10. (canceled)

11. (previously presented) The rotary atomizer of claim 9, said groove being helical.

12. (canceled).

13. (previously presented) A cleaning system for a rotary atomizer having a bell cup on a rotating element and an axial opening from the rotating element into the bell cup, said cleaning system comprising:

a cleaning fluid conduit in flow communication with the opening;

a flow enhancing formation defined in the opening to improve transport of cleaning fluid along the opening from said cleaning fluid conduit to the bell cup as the rotating element rotates, said flow enhancing formation being a groove;

an orifice behind the bell cup directed at an outer surface of the bell cup; and

a cleaning fluid conduit in flow communication with said orifice.

14. (original) The cleaning system of claim 13, said groove being helical.

15. (previously presented) The cleaning system of claim 13, said orifice configured to direct a fan-shaped spray at the outer surface of the bell cup.

16. (original) The cleaning system of claim 15, said orifice configured to direct said fan-shaped spray in an area nearer to an inner edge of the bell cup than to an outer edge of the bell cup.

17. – 20. (canceled)

21. (currently amended) A cleaning system for a rotary atomizer having a bell cup on a rotating element, said bell cup having an inner edge and an outer edge, said cleaning system comprising:

an orifice behind the bell cup directed at an outer surface of the bell cup, said orifice being configured to emit therefrom a fan-like spray against the outer surface of the bell cup; ~~and~~

a cleaning fluid conduit in flow communication with the orifice; and

said orifice being positioned with respect to said bell cup to direct said fan-like spray against the bell cup in an area nearer to the inner edge of the bell cup than to the outer edge of the bell cup.

22. (cancelled)